

AMENDMENTS TO THE CLAIMS

Without prejudice, this listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

Claims 1 - 18 (Canceled).

19. (Currently Amended) A method for detecting an occupancy state of a seat in a vehicle, comprising:

recording a 3D image of the seat using an image recording system;
obtaining a 3D pattern of the seat;
evaluating the 3D image of the seat with respect to at least one of the occupancy state of the seat and an occupancy type of the seat, wherein the evaluation includes consideration of the 3D pattern of the seat, and wherein if a deviation between the 3D image and the 3D pattern exceeds a predetermined minimum value for the evaluation, a determination of the occupancy state is made indicating that the seat is occupied, and wherein the determination of the occupancy state is regarded as conclusive only if substantially identical evaluation result is obtained over a plurality of sequential time points; and

activating a restraint mechanism associated with the seat, as a function of at least one of the occupancy state of the seat and the occupancy type of the seat.

20. (Previously Presented) The method as recited in Claim 19, wherein the 3D pattern of the seat is subdivided into partial regions of the seat, and the evaluation of the 3D image includes evaluation of the partial regions of the 3D pattern of the seat.

21. (Previously Presented) The method as recited in Claim 20, wherein the evaluation of the partial regions of the 3D pattern includes evaluation of mutual relationships of the partial regions with one another.

22. (Previously Presented) The method as recited in Claim 19, wherein the 3D pattern of the seat is a wire screen model representing an approximation of the real shape of the seat.

23. (Previously Presented) The method as recited in Claim 19, wherein the 3D pattern of the seat is derived from seat manufacturer's specification of the seat.

24. (Previously Presented) The method as recited in Claim 19, wherein the 3D pattern of the seat is derived in an initialization step from a 3D image of the seat in an unoccupied state under specified surrounding conditions.

25. (Canceled).

26. (Previously Presented) The method as recited in Claim 20, wherein, based on a comparison between a predetermined minimum value and a deviation between at least one selected partial region of the 3D pattern and a corresponding partial region of the 3D image, a type of at least one of an object and a person occupying the seat is determined.

27. (Previously Presented) The method as recited in Claim 26, wherein predetermined parameters of the at least one of the object and the person are further determined.

28. (Canceled).

29. (Currently Amended) The method as recited in ~~Claim 28~~ Claim 19, wherein, for the determination of the occupancy state, a temporal filtering is performed, including ascertaining one of a moving average and a median value of the deviation.

30. (Previously Presented) The method as recited in Claim 19, wherein, for the evaluation, at least one of measured data corresponding to the 3D image and data corresponding to the 3D pattern are transformed to provide a uniform data format for the 3D image and the 3D pattern.

31. (Currently Amended) A system device for determining an occupancy state of a seat in a vehicle, the occupancy state being considered in the activation of a restraint mechanism associated with the seat, the system device comprising:

an image recording system for recording a 3D image of the seat; and

an evaluation circuit for evaluating the 3D image of the seat with respect to at least one of the occupancy state of the seat and an occupancy type of the seat, wherein the evaluation includes comparing a 3D pattern of the seat to the recorded 3D image of the seat, and wherein if a deviation between the 3D image and the 3D pattern exceeds a predetermined minimum value for the evaluation, a determination of the occupancy state is made indicating that the seat is occupied, and wherein the evaluation circuit includes a filter circuit for temporal filtering of a plurality of evaluation results sequentially obtained over time, and wherein the determination of the occupancy state is regarded as conclusive only if substantially identical evaluation result is obtained over a plurality of sequential time points.

32. (Previously Presented) The device as recited in Claim 31, wherein the 3D pattern of the seat is subdivided into partial regions of the seat, and the evaluation of the 3D image includes evaluation of the partial regions of the 3D pattern of the seat.

33. (Previously Presented) The device as recited in Claim 31, further comprising a memory associated with the evaluation circuit for storing data for the 3D pattern, wherein the 3D pattern is in the form of a wire screen model.

34. (Previously Presented) The device as recited in Claim 33, wherein the 3D pattern data is obtained from an external source.

35. (Previously Presented) The device as recited in Claim 33, wherein the 3D pattern data are derived in an initialization step from 3D image data of an unoccupied seat under predefined surrounding conditions.

36. (Canceled).